

**ABSTRACT**

**DOWNHOLE COMPRESSOR**

5           A downhole dynamic compressor comprises an electric  
motor having a stator 6 with stationary windings and an  
armature with permanent magnets 7 supported on gas bearings  
9, 10 for rotation relative to the stator. The gas bearings  
9 and 10 are arranged at the upstream and downstream  
10 opposite ends of the motor, respectively. The dynamic  
compressor has a bladed wheel 12 mounted on an overhanging  
end of the motor armature 7 that projects beyond the gas  
bearing 9 at the upstream end of the motor, whereby all the  
gas bearings of the compressor and the electric motor are  
15 arranged on the downstream side of the dynamic compressor.

Figure 1